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APPLICATION OF

SHENANDOAH GAS COMPANY

CASE NO. PUE970616

**For authority to increase its rates and
charges for gas service and to revise its
tariffs**

REPORT OF ALEXANDER F. SKIRPAN, JR., HEARING EXAMINER

June 5, 1998

On August 1, 1997, Shenandoah Gas Company (“Shenandoah Gas” or “the Company”) filed an application for authority to increase its rates and charges for gas service and to revise its tariffs to increase the Company’s total annual operating revenues by \$2,306,000. By order dated August 20, 1997, the Commission authorized the Company to place its proposed rates into effect on an interim basis, subject to refund with interest, for service provided on and after December 28, 1997. The Commission’s order of August 20 also established a procedural schedule for the case and assigned the case to a Hearing Examiner.

On December 9, 1997, the Company requested authorization to place its proposed rates into effect for service rendered on and after December 28, 1997, and filed an executed bond to secure any refunds subsequently ordered by the Commission. By Ruling dated December 22, 1997, the Company’s bond was accepted for filing.

A public hearing on the application was convened on March 18, 1998. Counsel appearing were: Donald R. Hayes, Esquire, counsel for the Company; and Marta B. Curtis, Esquire, and C. Meade Browder, Esquire, counsel for the Commission’s Staff. No protestants or interveners appeared or participated in the hearing. Proof of public notice was marked and received into the record as Company Exhibit 1. A transcript of the hearing is filed with this Report. The Company and the Staff filed briefs on April 21, 1998.

SUMMARY OF THE RECORD

Shenandoah Gas seeks an increase in annual revenues of \$2,306,000 based on a test period ending March 31, 1997.¹ In direct testimony filed February 20, 1998, the Staff recommended that the Company’s requested annual increase be reduced from \$2,306,000 to \$1,225,049.² In addition, the Staff offered an alternative revenue apportionment and rate design

¹ Exhibit KGB-3, at 7; Exhibit KJL-5, at 2.

² Exhibit RFS-11, at Statement II.

that, among other things, reduces the level of increase to residential heating and cooling customers and significantly increases the rates of interruptible customers.³ On March 11, 1998, the Staff revised its overall annual revenue requirement increase recommendation to \$1,228,053.⁴

On March 16, 1998, the Company and the Staff filed a Joint Offer of Stipulation (“Stipulation”).⁵ As provided in the Stipulation, Shenandoah Gas now accepts all of the Staff’s revenue requirement adjustments with the exception of capital structure, cost of debt, and cost of equity.⁶ Furthermore, the Stipulation provides that Shenandoah Gas agrees to the Staff’s revenue apportionment and rate design methodologies.⁷

At the public hearing held on March 18, 1998, most of the testimony was admitted to record without cross-examination. Testimony entered by the Company by stipulation included: (i) the direct testimony of Kenneth G. Behrens concerning an overview of Shenandoah Gas’s case and support for advertising expense, organizational changes, and the margin sharing mechanism;⁸ (ii) the direct testimony of Michael G. Donovan regarding cost of capital issues;⁹ (iii) the direct testimony of Kenneth J. Lee covering revenue requirement calculations;¹⁰ (iv) the direct testimony of Jeffrey D. Wallace concerning revenue apportionment and rate design;¹¹ and (v) the supplemental direct testimony and revised supplemental schedules of Denise S. Gould regarding revenue apportionment and rate design.¹² Shenandoah Gas also offered the direct and rebuttal testimony of Charles E. Olson concerning the cost of equity,¹³ and the rebuttal testimony of Mr. Donovan regarding capital structure and cost of debt.¹⁴

In its direct case, Shenandoah Gas determined its overall cost of capital to be 10.03% based upon the adjusted capital structure of Washington Gas Light Company (“WGL”), its parent company, as of March 31, 1997, or as of the end of the test year.¹⁵ In addition, the Company’s overall cost of capital incorporates the midpoint of the 12.0% to 12.5% range for return on common equity recommended by Dr. Olson.¹⁶ On rebuttal, the Company offered an alternative capital structure recommendation based upon the average adjusted capital structure of WGL as of December 31, 1996, March 31, 1997, June 30, 1997, and September 30, 1997.¹⁷ Based on this

³ Exhibit CDW-13, at Attachment CDW-3.

⁴ Exhibit RFS-12, at Statement II.

⁵ Company Exhibit 2.

⁶ *Id.* at 2-3.

⁷ *Id.* at 3-6.

⁸ Exhibit KGB-3.

⁹ Exhibit MGD-4.

¹⁰ Exhibit KJL-5.

¹¹ Exhibit JDW-6.

¹² Exhibit DSG-7; Exhibit DSG-8.

¹³ Exhibit CEO-9; Exhibit CEO-17.

¹⁴ Exhibit MGD-18.

¹⁵ Exhibit MGD-4, at 5.

¹⁶ *Id.*; Exhibit CEO-9, at 35.

¹⁷ Exhibit MGD-18, at 7; Donovan, Tr. at 72-73.

capital structure Shenandoah Gas calculates the overall cost of capital to be 10.06%.¹⁸ The Company's revised overall cost of capital also incorporates the midpoint of Dr. Olson's recommended cost of equity range, Shenandoah Gas's recommended cost of long-term debt, and the Staff's higher cost of short-term debt.

In light of the Stipulation, the Staff submitted the following testimony without cross-examination: (i) the direct testimony and revised schedules of Robert F. Sartelle concerning revenue requirement calculations;¹⁹ and (ii) the direct testimony and revised schedules of Cody D. Walker regarding revenue apportionment and rate design.²⁰

The Staff's recommendations regarding capital structure, cost of debt, and cost of equity were presented in the direct testimony and revised testimony of Farris M. Maddox.²¹ Mr. Maddox calculates the overall cost of capital to be 8.784% based on a ratemaking capital structure for WGL as of September 30, 1997, and the midpoint of his recommended cost of equity range of 9.8% to 10.8%.²²

Subsequent to the hearing, on March 25, 1998, Shenandoah Gas and the Staff filed a Joint Motion to Amend Joint Offer of Stipulation to include language concerning the realignment of the regulatory activities of WGL in response to problems noted by Staff Witness Walker. The Amended Joint Offer of Stipulation ("Amended Stipulation") was admitted to record as Company Exhibit 20.

Pursuant to a Company request and Examiner's Ruling dated April 6, 1998, Shenandoah Gas filed revised interim rates for service rendered on and after April 8, 1998, designed to recover an annual increase of \$2,017,244. This change in interim rates incorporates: (i) the Company's agreement with the Staff's revenue requirement adjustments; (ii) Shenandoah Gas's requested cost of capital; and (iii) the Staff's revenue apportionment and rate design recommendations.

DISCUSSION

The Amended Stipulation, jointly offered by the Company and the Staff, offers a reasonable and just resolution to all revenue requirement (other than cost of capital), rate design, and revenue apportionment issues. The Amended Stipulation is supported by the record and should be adopted.

At the end of the hearing, the capital structure, cost of debt, and cost of equity remained in controversy. Nonetheless, the Company and the Staff both agreed to the use of WGL's consolidated capital structure as the basis for determining the cost of capital for Shenandoah Gas. In addition, both the Company and the Staff agreed to use the average of WGL's effective

¹⁸ Exhibit MGD-18, at Schedule 41.

¹⁹ Exhibit RFS-11; Exhibit RFS-12.

²⁰ Exhibit CDW-13; Exhibit CDW-14.

²¹ Exhibit FMM-15; Exhibit FMM-16.

²² *Id.* at Schedule 3-A.

borrowing cost for short-term debt from November 1997, through January 1998, as calculated by the Staff.²³ On brief, the Company further agreed to the Staff's recommended cost of long-term debt of 7.429%, which is the average cost of long-term debt as of September 30, 1997.²⁴ Consequently, the only issues that warrant further discussion are capital structure and cost of equity.

Capital Structure

The three capital structures proposed by the parties are as follows:

	Company's Recommended Capital Structure as of <u>March 31, 1997</u>²⁵		Company's Recommended Average Capital Structure Ending <u>September 30, 1997</u>²⁶		Staff's Recommended Capital Structure as of <u>September 30, 1997</u>²⁷	
	<u>Amount</u>	<u>Percent</u>	<u>Amount</u>	<u>Percent</u>	<u>Amount</u>	<u>Percent</u>
Short-Term						
Debt	54,446,000	4.85%	28,026,000	2.58%	58,026,000	5.143%
Long-Term						
Debt	398,174,000	35.44%	410,534,000	37.86%	440,648,000	39.054%
Preferred	28,434,000	2.53%	28,433,000	2.62%	28,430,000	2.520%
Common						
Equity	620,733,000	55.24%	595,757,000	54.93%	579,795,000	51.387%
J. D. Tax						
Credits	<u>21,851,000</u>		<u>21,737,000</u>	<u>2.00%</u>	<u>21,396,000</u>	<u>1.896%</u>
		<u>1.94%</u>				
Total	<u>1,123,638,000</u>	<u>100.00%</u>	<u>1,084,487,000</u>	<u>100.00%</u>	<u>1,128,295,000</u>	<u>100.00%</u>

Generally, the three capital structures proposed by the parties differ as to the date or dates upon which the capital structure is measured. In addition, the Company proposes an adjustment to reduce short-term debt by \$30 million for capital structures with September 30, 1997 as a measurement date. Shenandoah Gas supports this adjustment by claiming that the \$30 million in long-term debt, issued on September 25, 1997, was used to reduce short-term debt. This adjustment will be addressed separately below.

The Commission has long held that a capital structure "should be representative of the Company's actual capital structure during the period rates set herein will be in effect."²⁸

²³ Exhibit FMM-15, at 4, 8; Exhibit MGD-18, at 8.

²⁴ Company's Brief at 7-8.

²⁵ Exhibit MGD-4, at 4; Sch. 3, p 1; Company's Brief at 3.

²⁶ Exhibit MGD-18, at 7; Company's Brief at 6.

²⁷ Exhibit FMM-16, at Sch. 3-A; Staff's Brief at 4.

²⁸ *Application of Roanoke Gas Company, For a general increase in rates*, Case No. PUE920017, 1992 S.C.C. Ann. Rep. 324, 326.

Accordingly, in the Company's prior case, the Examiner rejected both Shenandoah Gas's proposed March 31, 1995 capital structure and the Staff's September 30, 1995 capital structure. Instead, the Examiner found a capital structure updated to June 30, 1995, contained capitalization ratios that "reflect a reasonable mix of capital which can be expected to support rate base."²⁹

The inherent problem in choosing an appropriate capital structure for the Company is that WGL's capital structure ratios tend to fluctuate seasonally. For example, equity ratios tend to be higher during the heating season, generally reaching their peak on March 31 at the end of the heating season. Conversely, equity ratios tend to be lower during the non-heating season, with their lowest levels generally recorded on September 30 at the end of the non-heating season. As documented by Staff witness Maddox, WGL's capital ratios have followed this pattern during each of the last three years.³⁰ Nonetheless, Mr. Maddox advocates use of the September 30 capital structure to incorporate the lower cost of debt issued in July and September of 1997.³¹ In addition, Mr. Maddox compensates for the relatively low equity ratio of the September 30 capital structure by upwardly adjusting the cost of equity by 20 basis points.³² This adjustment mathematically produces results similar to those obtained by applying Mr. Maddox's unadjusted cost of equity to an average annual equity ratio.³³

Because of the seasonal fluctuations of WGL's capital structures ratio, the use of an average capital structure, as proposed by Company witness Donovan, should produce capital ratios that are reflective of actual capital structures during the period rates will be in effect. In light of the Company's continuing efforts to refinance its long-term debt to take advantage of lower interest rates, Shenandoah Gas now endorses use of the Staff's cost of debt. Thus, the cost of capital will incorporate the lower cost of debt issued in July and September of 1997 without the utilization of skewed capital ratios.

However, while I agree that the Company's average capital structure produces capital ratios that are reflective of actual capital structures likely to occur during the period rates will be in effect, I do not agree with the Company's proposed \$30 million adjustment to short-term debt. Both the Company and the Staff determined the level of short-term debt based on the actual average daily balance for the twelve months ended September 30, 1997. This amounted to \$58.026 million.³⁴ Company witness Donovan recommends reducing this average actual daily balance for short-term debt by the proceeds of long-term debt issued on September 25, 1997, or by \$30 million.³⁵

²⁹ *Application of Shenandoah Gas Company, For authority to increase its rates and charges for gas service and to revise its tariffs*, Case No. PUE950058, Report of Deborah V. Ellenberg at 4 (May 3, 1996) (hereinafter "Examiner's Report").

³⁰ Exhibit FMM-16, at Schedule 4-A.

³¹ Exhibit FMM-15, at 4-5; Staff's Brief at 4-5.

³² Exhibit FMM-15, at 5, 19-20; Staff's Brief at 6.

³³ *Id.*

³⁴ Exhibit FMM-16, at Schedule 3-A, 4-A.

³⁵ Exhibit MGD-18, at 4; Company's Brief at 5-6.

Short-term debt usually is based on an actual average daily balance in recognition of its volatility. In this case, the Company argues that the \$30 million long-term debt issuance reduces WGL's need for short-term debt.³⁶ Nonetheless, the Company fails to provide any supporting evidence that suggests: (i) that WGL has reduced its level of short-term debt permanently, or (ii) that the average daily balance of short-term debt for the period ending September 30, 1997, is unrepresentative of short-term debt balances likely to occur during the period rates will be in effect. No evidence was presented showing that WGL has sustained a lower level of short-term debt subsequent to the issuance of the \$30 million in long-term debt. Indeed, Mr. Donovan testified that WGL reduces its short-term debt balance to zero once a year.³⁷ This demonstrates the volatility of short-term debt balances and supports the continued use of an actual average daily balance.

Moreover, a comparison of the total capital included in WGL's capital structure as measured at the end of the test year or March 31, 1997, as originally proposed by the Company, and at September 30, 1997, as proposed by the Staff, shows total capital to be approximately \$1,124 million and \$1,128 million, respectively. Shenandoah Gas's recommended average capital structure, with its proposed \$30 million exclusion from short-term debt, has a significantly lower level of total capital, or \$1,084 million. Thus, the Company's proposed adjustment does not appear to produce capital ratios that are reflective of actual capital structures likely to occur during the period rates will be in effect.

Accordingly, I find that the capital structure utilized in this proceeding should be the average capital structure for the period ending September 30, 1997, as proposed by the Company, but with short-term debt based upon the actual average daily balance for the twelve month period ending September 30, 1997. This capital structure is shown below:

	Amount	Percent
Short-Term Debt	58,026,000	5.207%
Long-Term Debt	410,534,000	36.836%
Preferred	28,433,000	2.551%
Common Equity	595,757,000	53.456%
J. D. Tax Credits	<u>21,737,000</u>	<u>1.950%</u>
Total Capital	<u><u>1,114,487,000</u></u>	<u><u>100.000%</u></u>

Cost of Equity

In the Company's prior case, Case No. PUE950058, Shenandoah Gas's authorized cost of equity was set at 10.5% to 11.5%.³⁸ In that case, the cost of equity ranges recommended by

³⁶ Company's Brief at 5.

³⁷ Donovan, Tr. at 64.

Company witness Olson and Staff witness Maddox were 12.25% to 12.75%, and 10.0% to 11.0%, respectively.³⁹ These same witnesses provide similar, but lower, recommendations in the Company's current case.

In this case, Dr. Olson recommends a cost of equity range of 12.0% to 12.5%. This recommendation is based on an arithmetic average of his discounted cash flow ("DCF") study and his interest premium study. Dr. Olson's recommendation also includes adjustments for issuance costs and market breaks. Most of Dr. Olson's testimony is devoted to his DCF study, which he describes as:

the most reasonable way to go about estimating the cost of common equity, assuming an original cost rate base The DCF approach to estimating the cost of equity capital is based on the premise that the investor is buying two things when he purchases common stock, dividends and growth. . . . The cost of equity capital using the discounted cash flow method is that discount rate which equates a given market price of a stock with the expected future flow of dividends.⁴⁰

In performing his DCF study, Dr. Olson analyzes both comparable companies and WGL, and concludes that the investor-required return for Shenandoah Gas is 10.75% to 11.25%.⁴¹ Dr. Olson "checks" his DCF results with a risk premium study, which indicates that the cost of equity for Shenandoah Gas is 12.5% to 13.5%.⁴² Interestingly, Dr. Olson testifies that a risk premium should only be used as a check for the DCF "[p]rimarily because of the difficulty in selecting an appropriate time period to use to estimate an expected risk premium, this approach can produce a wide range of results."⁴³ During the hearing, Dr. Olson added, "I don't consider it [risk premium] to be as precise a method for determining the cost of common equity capital as the DCF."⁴⁴ Nonetheless, Dr. Olson gives equal weight to his risk premium study and determines the lower end of his recommended range, or 12.0%, by averaging the midpoint of his DCF study, or 11.0%, with the midpoint of his risk premium study, or 13.0%.⁴⁵ Dr. Olson calculates the top of his cost of equity range by adding fifty basis points for his proposed market-to-book adjustment.⁴⁶

Staff witness Maddox employed three methodologies in determining his cost of equity recommendation. First, Mr. Maddox conducted a DCF study for WGL and a group of six proxy

³⁸ *Application of Shenandoah Gas Company, For authority to increase its rates and charges for gas service and to revise its tariffs*, Case No. PUE950058, 1996 S.C.C. Ann. Rep. 272.

³⁹ Examiner's Report at 5-6.

⁴⁰ Exhibit GEO-9, at 15.

⁴¹ *Id.* at 31.

⁴² *Id.* at 32.

⁴³ *Id.* at 21.

⁴⁴ Olson, Tr. at 26.

⁴⁵ Exhibit GEO-9, at 35; Company's Brief at 9.

⁴⁶ *Id.*

gas distribution companies. DCF calculations for WGL and his group of six proxy gas distribution companies produce cost of equity range estimates of 7.98% to 8.86% and 9.03% to 9.89%, respectively.⁴⁷ Second, Mr. Maddox combined a risk premium of 4.61% with a current 30-year Treasury bond rate of 5.97% to estimate a cost of equity of 10.58% for Shenandoah Gas.⁴⁸ Finally, Mr. Maddox employs a capital asset pricing model (“CAPM”) analysis to estimate the cost of equity for the Company to be 11.6%.⁴⁹

Mr. Maddox also calculated a flotation cost adjustment of about 2.4% based on historic costs actually incurred by WGL in issuing common stock.⁵⁰ This adjustment adds eleven to twelve basis points to the Staff’s cost of equity estimates described above.⁵¹ In addition, as described earlier, Mr. Maddox proposed an additional adjustment of twenty basis points to compensate for the lower equity ratio in his recommended capital structure. During the hearing, Mr. Maddox testified that if WGL’s capital structure contained a 54% equity ratio, he would not have proposed the twenty basis point adjustment.⁵² Consequently, adoption of the Company’s average capital structure eliminates the need to make this equity adjustment.

It has long been settled that “the return to the equity owner should correspond with returns on investments in other businesses having corresponding risks, and the return ‘should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital.’”⁵³ Both witnesses indicate that their cost of equity recommendations satisfy these standards. Both witnesses conducted DCF studies for both WGL and a group of companies with comparable risks. Both witnesses conducted risk premium type analyses. Thus, the differences in recommendations outlined above generally are related to the exercise of professional judgment as to the technical development and interpretation of the various cost of equity models.

Specifically, differences between the cost of equity recommendations of the Company and the Staff can be traced to: (i) the timing of the completion of the various studies; (ii) the treatment of market-to-book ratios and merger premiums; (iii) the derivation of projected growth rates; (iv) the proper measurement of risk premiums for equity; and (v) the basis and application of flotation costs. Each of these differences is discussed below.

Since the Company’s prior case, interest rates generally have declined and stock prices generally have increased. Both of these factors indicate a reduction in the cost of equity. Indeed, both witnesses recommend cost of equity ranges in this case that are lower than their recommendations in Shenandoah Gas’s prior case. Moreover, Dr. Olson’s estimates of the cost

⁴⁷ Exhibit FMM-15, at 13-14.

⁴⁸ *Id.* at 16-17.

⁴⁹ *Id.* at 18-19.

⁵⁰ *Id.* at 19.

⁵¹ *Id.*

⁵² Maddox, Tr. at 55.

⁵³ *Howell v. C & P Tel. Co.*, 215 Va. 549, 558 (1975) (quoting *FPC v. Hope Natural Gas*, 320 U.S. 591, 603 (1944)), *appeal dismissed*, 423 U.S. 805 (1975).

of equity are based on studies that were performed during the first half of 1997. Since then, interest rates have continued to trend lower and stock prices have continued to trend higher. In contrast to Dr. Olson, Staff witness Maddox bases his cost of equity recommendations on studies that contain information through January of 1998. In this case, the use of more current data should yield a lower cost of equity estimate. No evidence has been presented to suggest that the more current data used in Mr. Maddox's studies is an aberration or fails to represent economic conditions likely to prevail during the period the rates from this case will be in effect. Consequently, Dr. Olson's use of stale data introduces an upward bias to his cost of equity estimates.

On rebuttal, Dr. Olson questioned the appropriateness of growth rates used by Mr. Maddox in his DCF in light of the fact that the stock of WGL, as well as other gas distribution companies, currently is selling well above book value.⁵⁴ In this regard, Dr. Olson points out that "[t]he DCF approach is market based but the results are applied to a book value investment base."⁵⁵ Dr. Olson further questions Mr. Maddox's DCF growth rates by intimating that the current stock price of gas distribution utilities includes a fifteen to twenty percent merger premium.⁵⁶ In essence, the issues raised by Dr. Olson on rebuttal call into question all DCF studies, not just those presented by Mr. Maddox. Many utilities have had stock trading well above book value for many years. Nonetheless, DCF analyses continue to be widely utilized by Commissions and cost of capital witnesses, including all of the witnesses in this case. On the other hand, no one in this case presents the DCF as the only method for estimating the cost of equity. Even without empirical evidence as to the existence of a merger premium in current stock prices, Mr. Maddox readily acknowledged such a possibility, but pointed out that reliance on more than one cost of equity method overcomes such potential problems.⁵⁷

A more explicit difference between the DCF growth rates used by the witnesses is that Dr. Olson placed more reliance on historic growth rates while Mr. Maddox gave more weight to projected growth rates. As stated above, the cost of equity set in this case must be sufficient to permit Shenandoah Gas to maintain credit and attract capital. Thus, I agree with Mr. Maddox that his method is "more consistent with the forward-looking approach of the DCF model and the expectational nature of the cost of equity."⁵⁸

Dr. Olson and Mr. Maddox also disagreed concerning the determination of risk premiums. Dr. Olson's risk premium attempts to measure the additional return required by investors to invest in a firm's common stock rather than to invest in its bonds. For this measure, Dr. Olson utilizes a risk premium of 6.7% published in Roger G. Ibbotson's *Stocks, Bonds, Bills and Inflation: 1997 Yearbook* ("Yearbook") which is based on data from a 70-year study period.⁵⁹ By contrast, Mr. Maddox measures the additional return required by investors to invest in a firm's common stock

⁵⁴ Exhibit CEO-17, at 2.

⁵⁵ *Id.*

⁵⁶ *Id.* at 3.

⁵⁷ Maddox, Tr. at 36-37.

⁵⁸ Exhibit FMM-15, at 21.

⁵⁹ Exhibit CEO-9, at 31-32; Company's Brief at 12-13.

rather than to invest in 30-year Treasury bonds. Mr. Maddox calculates the risk premium to be 4.61% based on data from 1980 to 1993.⁶⁰ Mr. Maddox emphasizes that risk premiums change over time and that there is an inverse relationship between risk premiums and interest rates. Mr. Maddox further criticizes Dr. Olson's risk premium as being upwardly biased. In support, Mr. Maddox quotes from the Yearbook, which states that its risk premium is upwardly biased because it assumes that bonds are sold before maturity at a capital loss if the market yield has risen since the time of purchase.⁶¹ On the other hand, Dr. Olson believes the shorter time frame used for calculating Mr. Maddox's risk premium is inappropriate and that the risk premium published in the Yearbook is widely quoted to investors, and is thus more meaningful.⁶²

Overall, the weight of the evidence and past Commission precedent tends to support the position of Mr. Maddox's risk premium. When the Commission established a mechanism that allowed the return on equity to fluctuate over time for telephone companies operating under an alternative regulatory plan, the Commission explicitly recognized the inverse relationship between risk premium and interest rates.⁶³ Indeed, Mr. Maddox's risk premium falls within the risk premium range set by the Commission in that case.⁶⁴ Moreover, arguments by Dr. Olson for a longer study period and for the use of a widely quoted risk premium do not answer the Yearbook's own characterization that its risk premium is upwardly biased. Mr. Maddox's study period is long enough to establish a reasonable relationship between the cost of equity and the cost of debt.

Finally, the differences in flotation cost between the witnesses are neither new nor unique to this case. As in the past, Dr. Olson advocates a large flotation cost allowance designed to allow a cushion for issuance in down market situations. Such recommendations were not adopted in the past and will not be adopted here. The Commission has a long policy of permitting flotation cost allowances only where, and to the extent, a utility actually incurs a cost to issue common stock.⁶⁵ The flotation adjustment recommended by Mr. Maddox is consistent with the Commission's prior decisions and is reasonable in this case.

⁶⁰ Exhibit FMM-15, at 16-17.

⁶¹ *Id.* at 22-23.

⁶² Exhibit CEO-17, at 6-7; Company's Brief at 12-13.

⁶³ *See, Commonwealth of Virginia Ex rel. the State Corporation Commission, Ex Parte: In the matter of evaluating the Experimental Plan for Alternative Regulation of Virginia Telephone Companies*, Case No. PUC920029, 1993 S.C.C. Ann. Rep. 212.

⁶⁴ *Id.* at 216.

⁶⁵ *See, Application of Virginia Electric and Power Company, For a general increase in rates*, Case No. PUE920041, 1994 S.C.C. Ann. Rep. 319 (flotation costs included in return on equity); *Application of Commonwealth Gas Services, Inc., For a general increase in rates*, Case No. PUE920037, 1993 S.C.C. Ann. Rep. 262 (flotation costs excluded from return on equity because the utility did not have plans for future stock offerings); *Application of Virginia-American Water Company, For a general increase in rates*, Case No. PUE900017, 1991 S.C.C. Ann. Rep. 273 (flotation costs excluded from return on equity, no stock offerings since 1955 and no planned future offering); and *Application of Northern Virginia Natural Gas, A Division of Washington*

Therefore, I find that the record in this case supports a flotation-adjusted cost of equity range of 10.2% to 11.2%. For gas companies, the midpoint of the range is used for calculating the revenue requirement.

REVENUE REQUIREMENT

Based upon my resolution of the two issues discussed above, the agreement of the Company and the Staff, and my acceptance of all accounting, rate design, and revenue apportionment issues that were not in dispute, I find that the Company's revenue requirement is as follows:

1. Staff's Adjusted Jurisdictional Rate Base - per Exhibit RFS-12, Statement IV (revised)	\$ 39,160,271
2. Return based on average capital structure and return on equity	<u>9.062%</u>
3. Required Income	\$ 3,548,704
4. Less: Adjusted Net Operating Income - per Exhibit RFS-12, Statement IV (revised)	2,663,043
5. Add: FIT effect of capital structure change	<u>22,162</u>
6. Required Income Increase	\$ 907,823
7. Revenue Conversion Factor - per Exhibit RFS-12, Statement IV (revised)	<u>0.632542</u>
8. Gross Revenue Increase Required	<u><u>\$ 1,435,198</u></u>

FINDINGS AND RECOMMENDATIONS

In conclusion, based on the Amended Stipulation and the other evidence received in this case, I find that:

- (1) The use of a test year ending March 31, 1997, is proper in this proceeding;
- (2) The Company's test year operating revenues, after all adjustments, were \$21,172,908;
- (3) The Company's test year operating revenue deductions, after all adjustments, were \$18,516,517;
- (4) The Company's test year net operating income and adjusted net operating income, after all adjustments were \$2,656,391 and \$2,640,881, respectively;

Gas Light Company, To revise its tariffs, Case No. PUE880024, 1988 S.C.C. Ann. Rep. 320 (flotation costs included in the return on equity on a case-by-case basis).

(5) The Company's current rates produce a return on adjusted rate base of 6.74% and a return on equity of 6.36%;

(6) The Company's current cost of equity is within a range of 10.20% - 11.20%, and the Company's rates should be established based on the 10.70% midpoint of the equity range;

(7) The Company's overall cost of capital, using the midpoint of the equity range and the capital structure found reasonable herein, is 9.062%;

(8) The Company's adjusted test year rate base is \$39,160,271;

(9) The Company's application requesting an annual increase in revenues of \$2,306,000 is unjust and unreasonable because it will generate a return on rate base greater than 9.062%;

(10) The Company requires \$1,435,198 in additional gross annual revenues to earn a 9.062% return on rate base;

(11) The Company's proposed rate design, its revenue apportionment, including the establishment of separate rate schedules for residential service, commercial and industrial service, group metered apartment service, and interruptible service should be modified in accordance with the Amended Stipulation;

(12) The Company should institute new miscellaneous charges and adjust existing miscellaneous charges in accordance with the Amended Stipulation;

(13) The Company should file permanent rates designed to produce the additional revenues found reasonable herein using the revenue apportionment methodology proposed by the Staff and agreed to by the Company in the Amended Stipulation;

(14) The Company should be required to refund, with interest, all revenues collected under its interim rates in excess of the amount found just and reasonable herein;

(15) The Company shall revise the Margin Sharing Mechanism to exclude from the calculation the non-gas margins as specified in the Amended Stipulation;

(16) The Company shall conduct a new depreciation study and file it with the Commission by the earlier of its next rate case filing, or before March 18, 2001; and

(17) The Company shall implement Staff's accounting recommendations as detailed in Staff Witness Sartelle's testimony in accordance with the Amended Stipulation.

In accordance with the above findings, ***I RECOMMEND*** that the Commission enter an order that:

1. ***ADOPTS*** the findings in this Report;

2. **GRANTS** the Company an increase in gross annual revenues of \$1,435,198; and
3. **DIRECTS** the prompt refund of all amounts collected under interim rates in excess of the rate increase found just and reasonable herein.

COMMENTS

The parties are advised that, pursuant to Rule 5:15(e), any comments to this Report must be filed with the Clerk of the Commission in writing, in an original and fifteen (15) copies, within fifteen (15) days from the date of this Report. The mailing address to which any such filing must be sent is Document Control Center, P.O. Box 2118, Richmond, Virginia 23218. Any party filing such comments shall attach a certificate to the foot of such document certifying that copies have been mailed or delivered to all other counsel of record and to any party not represented by counsel.

Respectfully submitted,

Alexander F. Skirpan, Jr.
Hearing Examiner